```
     (FILE 'HOME' ENTERED AT 18:43:56 ON 15 MAR 2003)

     FILE 'REGISTRY' ENTERED AT 18:44:03 ON 15 MAR 2003
L1             4 S 4/ELC AND (Y OR GD) AND TI AND CE AND O
L2             4 S 4/ELC.SUB AND (Y OR GD) AND TI AND CE AND O

     FILE 'CAPLUS' ENTERED AT 18:44:51 ON 15 MAR 2003
L3             4 S L2
L4             4 S L1
L5             4 S L3 OR L4

     FILE 'REGISTRY' ENTERED AT 19:17:38 ON 15 MAR 2003
L6            60 S 6/ELC AND SM AND (MG OR CA OR SR OR BA) AND TI AND CE AND O
L7            24 S 6/ELC AND SM AND (MG OR CA OR SR OR BA) AND (LA OR PR OR ND O
L8             0 S 6/ELC AND SM AND (MG OR CA OR SR OR BA) AND (TB OR DY OR HO O
L9             0 S 6/ELC.SUB AND SM AND (MG OR CA OR SR OR BA) AND (TB OR DY OR

     FILE 'CAPLUS' ENTERED AT 19:20:57 ON 15 MAR 2003
L10           16 S L7
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     FILE 'REGISTRY' ENTERED AT 18:44:03 ON 15 MAR 2003
L1             4 S 4/ELC AND (Y OR GD) AND TI AND CE AND O
L2             4 S 4/ELC.SUB AND (Y OR GD) AND TI AND CE AND O

     FILE 'CAPLUS' ENTERED AT 18:44:51 ON 15 MAR 2003
L3             4 S L2
L4             4 S L1
L5             4 S L3 OR L4
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     (FILE 'HOME' ENTERED AT 12:30:44 ON 15 MAR 2003)

     FILE 'REGISTRY' ENTERED AT 12:30:53 ON 15 MAR 2003
L1             7 S SM AND TI AND CE AND O AND 4/ELC
L2             7 S SM AND TI AND CE AND O AND 4/ELC.SUB
L3             7 S L1 OR L2
L4             0 S SM AND ND AND TI AND CE AND O AND 5/ELC
L5             0 S SM AND ND AND TI AND CE AND O AND 5/ELC.SUB
L6            11 S SM AND TI AND CE AND O AND 5/ELC.SUB
L7            11 S SM AND TI AND CE AND O AND 5/ELC
L8            11 S L6 OR L7
L9             0 S SM AND MG AND TI AND CE AND O AND 5/ELC
L10            0 S SM AND MG AND TI AND CE AND O AND 5/ELC.SUB
L11            0 S SM AND ND AND MG AND TI AND CE AND O AND 6/ELC
L12            0 S SM AND ND AND MG AND TI AND CE AND O AND 6/ELC.SUB
L13           60 S SM AND TI AND CE AND O AND 6/ELC
L14           60 S SM AND TI AND CE AND O AND 6/ELC.SUB
L15            0 S SM AND MG AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L16            0 S SM AND MG AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L17            0 S SM AND CA AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L18            0 S SM AND CA AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L19            0 S SM AND SR AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L20            0 S SM AND SR AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L21           24 S SM AND BA AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L22           24 S SM AND BA AND (LA OR PR OR ND OR PM OR EU OR TB OR DY OR HO O
L23           24 S L21 OR L22

     FILE 'CAPLUS' ENTERED AT 12:39:51 ON 15 MAR 2003
L24            4 S L3
L25            7 S L8
L26           16 S L23
L27           25 S L24 OR L25 OR L26

     FILE 'REGISTRY' ENTERED AT 12:52:08 ON 15 MAR 2003
L28            0 S 5/ELC AND SM AND (LA OR PR OR PM OR EU OR TB OR DY OR HO OR E
L29            0 S 5/ELC AND GD AND (LA OR PR OR PM OR ND OR EU OR TB OR DY OR H
L30            0 S 5/ELC AND Y AND (LA OR PR OR PM OR ND OR EU OR TB OR DY OR HO
L31            0 S 5/ELC.SUB AND SM AND (LA OR PR OR PM OR EU OR TB OR DY OR HO
L32            0 S 5/ELC.SUB AND GD AND (LA OR PR OR PM OR ND OR EU OR TB OR DY
L33            0 S 5/ELC.SUB AND Y AND (LA OR PR OR PM OR ND OR EU OR TB OR DY O
L34           10 S 5/ELC AND SM AND (MG OR CA OR SR OR BA) AND TI AND CE AND O
L35           10 S 5/ELC.SUB AND SM AND (MG OR CA OR SR OR BA) AND TI AND CE AND
L36           10 S L34 OR L35

     FILE 'CAPLUS' ENTERED AT 13:02:33 ON 15 MAR 2003
L37            6 S L36
L38            0 S L37 NOT L27
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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	ErrorDefinition	Errors
1	BRS	L2	31	(RICHARDS and ROBIN).in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:19			0
2	BRS	L3	43	1 2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:20			0
3	BRS	L5	0	3 and "Ce.sub."$8	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:21			0
4	BRS	L1	22	(CUTLER and RAYMOND).in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:21			0
5	BRS	L6	2532	"Ce.sub."$8	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:22			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	ErrorDefinition	Errors
6	BRS	L7	0	3 and 6	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:22			0
7	BRS	L4	15	3 and (ce cerium ceria)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/15 13:26			0
8	BRS	L8	65944	252/$.ccls.	USPAT; US-PGPUB	2003/03/15 13:27			0
9	BRS	L9	330	8 and "Ce.sub."$8	USPAT; US-PGPUB	2003/03/15 14:12			0
10	BRS	L10	41	9 and "Ti.sub."$8	USPAT; US-PGPUB	2003/03/15 14:12			0
11	IS&R	L11	1202	(429/30,33).CCLS.	USPAT; US-PGPUB	2003/03/15 14:12			0
12	BRS	L12	44	11 and "Ce.sub."$8	USPAT; US-PGPUB	2003/03/15 14:12			0
13	BRS	L13	7	12 and "Ti.sub."$8	USPAT; US-PGPUB	2003/03/15 14:12			0
14	BRS	L14	5	13 not 10	USPAT; US-PGPUB	2003/03/15 14:12			0

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:296204 CAPLUS
DOCUMENT NUMBER: 135:95101
TITLE: Present several items on ceria-based ceramic electrolytes: synthesis, additive effects, reactivity and electrochemical behavior
AUTHOR(S): Jurado, J. R.
CORPORATE SOURCE: Inst. Ceram. Vidrio, ICV-CSIC, Madrid, 28500, Spain
SOURCE: Journal of Materials Science (2001), 36(5), 1133-1139
CODEN: JMTSAS; ISSN: 0022-2461
PUBLISHER: Kluwer Academic Publishers
March 1, 2001
DOCUMENT TYPE: Journal
LANGUAGE: English

TI Present several items on ceria-based ceramic electrolytes: synthesis, additive effects, reactivity and electrochemical behavior

AB Ceria-doped electrolytes have been extensively studied, because they are promising candidates for intermediate temp. solid oxide fuel cells (ITSOFC). In this work, several relevant aspects, such as powder synthesis, small additive effects, reactivity of electrode/electrolyte and interface microstructure were described. The combustion synthesis is a really suitable synthesis route to achieve, at low temps., finely, homogeneous and reactive powders for ceria based electrolytes. The presence of small amts. of titania is beneficial, since it produces a significant redn. of the grain boundary resistance. On the other hand, the reactivity of the ceria electrolyte against lanthanum-NiO perovskites at high temps. (1475.degree.), enhances both the LaNiO3-.delta. decompn. and the diffusion of Ni and La ions as is noted in the reactivity anal.

IT Cathodic polarization
Combustion synthesis
Electric impedance
Fuel cell electrolytes
Microstructure
Solid state fuel cells
(synthesis, additive effects, reactivity and electrochem. behavior of ceria-based ceramic electrolytes)

IT 156745-40-3P, Cerium gadolinium oxide Ce0.92Gd0.16O2.08
348112-69-6P, Cerium gadolinium titanium oxide (Ce0.92Gd0.16Ti0.01O2.1) 348112-70-9P, Aluminum cerium gadolinium oxide (Al0.02Ce0.92Gd0.16O2.11) 348112-71-0P, Calcium cerium yttrium oxide (Ca0.04Ce0.92Y0.08O2)
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(synthesis, additive effects, reactivity and electrochem. behavior of ceria-based ceramic electrolytes)

IT 13494-98-9, Yttrium nitrate hexahydrate 19598-90-4, Gadolinium nitrate hexahydrate 74418-77-2 185387-06-8, Nitric acid, calcium salt, hexahydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis, additive effects, reactivity and electrochem. behavior of ceria-based ceramic electrolytes)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT